MICHAEL W. HORNUNG
Research Toxicologist
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Education:
Ph.D., Environmental Toxicology, University of Wisconsin, Madison, 1998
B.S., Biology, University of Wisconsin, Stevens Point, 1988

Experience:

2005-Present	Research Toxicologist, US EPA, Duluth, MN
2000-2005	NHEERL Post-Doctoral Fellow, US EPA, Duluth, MN
1998-2000	National Research Council Post-Doctoral Research Associate, US EPA, Duluth, MN

Research Interests and Skills:
Effects of endocrine disrupting chemicals in aquatic systems.
Development of *in vitro* assays for testing effects of chemicals on endocrine pathways.
Structure activity relationships for endocrine disruption of steroid and thyroid hormone pathways.

Professional Societies:
Society of Toxicology
Northland Chapter of the Society of Toxicology
Society of Environmental Toxicology and Chemistry
Midwest Chapter of the Society of Environmental Toxicology and Chemistry

Selected Appointments/Honors/Major Awards:
US EPA, Scientific Technological Achievement Award, Level II. 2011: "Description of a Conceptual Framework for Use of Mechanistic Toxicology Data for Ecological Risk Assessment"
US EPA, Scientific Technological Achievement Award, Level I, 2008. "Research to Understand the Metabolism and Tissue Distribution of Toxic Chemicals in Fish Early Life Stages"
Editorial Board – *Environmental Toxicology and Chemistry:* 2000-2003

Selected Publications:
Paul, K.B., J.M. Hedge, C. Macherla, D. Filer, E. Burgess, S.O. Simmons, K.M. Crofton, and M.W. Hornung. 2013. Cross-species analysis of thyroperoxidase inhibition by xenobiotics demonstrates conservation of response between pig and rat. *Toxicology* 312:97-107.

Tietge, J.E., S.J. Degitz, J.T. Haselman, B.C. Butterworth, J.J. Korte, P.A Kosian, A.J. Lindberg-Livingston, E.M. Burgess, P.E Blackshear, and M.W. Hornung. 2012. Inhibition of the thyroid hormone pathway in *Xenopus laevis* by 2-mercaptobenzothiazole. *Aquatic Toxicology* 126:128-136.

Hornung, M.W., S.J. Degitz, L.M. Korte, J.M. Olson, P.A. Kosian, A.L. Linnum, and J.E. Tietge. (2010). Inhibition of thyroid hormone release from cultured amphibian thyroid glands by methimazole, 6-propylthiouracil, and perchlorate. *Toxicological Sciences* 118:42-51.

Ankley, G.T., R. Bennett, R. Erickson, D. Hoff, M.W. Hornung, R.D. Johnson, D.R. Mount, J.W. Nichols,
C.L. Russom, P.K. Schmieder, J.A. Serrrano, J.E. Tietge, and D.L. Villeneuve. 2010. Adverse outcome pathways: A conceptual framework to support ecotoxicology research and risk assessment. *Environmental Toxicology and Chemistry* 29:730-741.

Hornung, M.W., P.M. Cook, P.N. Fitzsimmons, D.W. Kuehl, and J.W. Nichols. 2007. Tissue distribution and metabolism of benzo[a]pyrene in embryonic and larval medaka (*Oryzias latipes).* *Toxicological Sciences* 100:393-405.

Denny, J.S., M.A. Tapper, P.K. Schmieder, M.W. Hornung, K.M. Jensen, G.T. Ankley, and T.R. Henry. 2005. Comparison of relative binding affinities of endocrine active compounds to fathead minnow and rainbow trout estrogen receptors. *Environmental Toxicology and Chemistry* 24:2948-2953.

Hornung, M.W., K. Jensen, J. Korte, M. Kahl, E. Durhan,T. Henry, J. Denny, and G.T.Ankley. 2004. Mechanistic basis for estrogenic effects of methyltestosterone in fathead minnow: Evidence for conversion of 17±-methyltestosterone to 17±-methylestradiol. *Aquatic Toxicology* 66:15-23.

Hornung, M.W., P.K. Schmieder, and G.T. Ankley. 2001. Induction of an estrogen-responsive reporter gene in rainbow trout hepatoma cells (RTH 149) at 11 or 18°C. *Environmental Toxicology and Chemistry* 22:866-871.